



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILED DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,414	01/03/2002	Boris Bronfin	MM4501	7049
1109	7590	02/25/2005	EXAMINER	
ANDERSON, KILL & OLICK, P.C. 1251 AVENUE OF THE AMERICAS NEW YORK, NY 10020-1182			IP, SIKYIN	
		ART UNIT	PAPER NUMBER	
		1742		

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/038,414	BRONFIN ET AL.
Examiner	Art Unit	
Sikyin Ip	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 September 2004 and 03 December 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,21-26 and 29-43 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,21-26,29-43 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .

5) Notice of Informal Patent Application (PTO-152)

6) Other: ____ .

DETAILED ACTION

Claim Objections

Claims 22, 25, 32, and 38 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 22 and 25 are objected to because they are depending on deleted claim 2.

Claims 32 and 38 are objected to because they fail to further limit the subject matter of a previous claim. Limitation as set forth in claims 32 and 38 is already recited in instant amended claim 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 21-26, and 29-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claimed Fe content (up to 0.0004 wt.%) is not supported by the specification as originally file. Page 6, last three lines of instant specification discloses Fe content less than "0.004 wt.%".

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application

indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 21-26, and 29-43 are rejected under 35 U.S.C. § 103 as being unpatentable over U.S. patent publication US2001/0055539 to Nakamura or JP 02047238 in view of USP 6139651 to Bronfin (PTO-1449).

Nakamura in page 1, [0002], [0017] and page 2, [0037] discloses the a Mg based composition which overlaps the claimed composition. Nakamura in Figures 6, 8, 11,

and 12 disclose tensile strength which indicate the yield strength would be higher than the claimed minimum yield strength. JP 02047238 in abstract discloses a Mg based alloy composition overlaps the claimed Mg based alloy composition range. Nakamura or JP 02047238 does not disclose intermetallic compound and creep rates. However, Bronfin in col. 5, lines 27-47 discloses the addition of Ca and Sr as in the cited references would form the claimed intermetallic compounds. In the Tables 4 and 8, Bronfin discloses creep rate and tensile properties under similar conditions as claimed are overlapped the claimed properties. Bronfin in col. 5, lines 48-55 disclose Mg based alloy composition similar to Nakamura or JP 02047238 is known to be used at temperature up to 150°C at load 100 MPa with secondary creep rate less than less than $1 \times 10^{-10} \text{ s}^{-1} \text{MPa}^{-1}$. Furthermore, instant specification discloses all casting methods known for Mg based alloys could be used and disclosed no special thermo mechanical steps to change the cast microstructure. Thus, the claimed creep rates, tensile properties, and intermetallic compounds are clearly material properties which would have been inherently possessed by the materials of cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. *In re Spade*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) and *In re Best*, 195 USPQ, 430 and MPEP § 2112.01.

Art Unit: 1742

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 195 USPQ 430, 433 (CCPA 1977). >When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 195 USPQ 430, 433 (CCPA 1977)."

Response to Arguments

Applicant's arguments filed September 07, 2004 have been fully considered but they are not persuasive.

Applicants' argument as set forth in paragraph bridging pages 3-5 of instant remarks is noted. But, the it is found inconsistent with recited transitional expression "consisting essentially of". It is well settled that the recitation of "consisting essentially of" limits the scope of a claim to the specified ingredients and those that do not materially affect the basic and novel characteristics of a composition. *Ex parte Davis, et al.*, 80 USPQ 448, 450 (PTO Bd. App. 1948), *In re Janakirama-Rao*, 317 F. 2d 951, 137 USPQ 893, 894 (CCPA 1963), *In re Garnero*, 412 F 2d 276, 162 USPQ 221, 223 (CCPA 1969), and *In re Herz, et al.*, 190 USPQ 461, 463 (CCPA 1976). When applicant contends that modifying components in the reference composition are

excluded by the recitation of “consisting essentially of” applicant has the burden of showing the basic and novel characteristic of his/her composition - i.e. a showing that the introduction of these components would materially change the characteristics of applicant's composition. *In re De Lajarte*, 337 F 2d 870, 143 USPQ 256 (CCPA 1964) and *Ex parte Davis, et al.*, 80 USPQ 448, 450 (PTO Bd. App. 1948). Furthermore, applicants fail to show their claimed alloy composition is critical by factual evidence by way of declaration. As stated in *In re Peterson*, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003), that “A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art”.

Applicants' argument with respect to the claimed Ca, Sn, and Zn content is noted. But, mere argument or conclusory statements in the specification is not sufficient. *In re Geisler* (CA FC) 43 USPQ2d 1362 (7/7/1997). Unexpected results have not been shown because which fail to compare the claimed subject matter with the closest prior art. *In re Burckel*, 201 USPQ 67, *In re Baxter Travenol Labs.*, 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), and *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984). Comparison must be done under identical condition except for the novel features of the invention. *In re Brown*, 173 USPQ 685 and *In re Chapman*, 148 USPQ 711. The showing of unexpected results must be occurred over the entire claimed range. *In re Clemens*, 622 F.2d 1029, 206 USPQ 289, 296 (CCPA 1980). The scope of the showing must be commensurate with the scope of the claims. *In re Tiffin*, 448 F.2d 791, 792 (Fed. Cir. 1971), *In re Coleman*, 205 USPQ

1172, *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983), and *In re Greenfield*, 197 USPQ 227.

Applicants argue that the Ca element is merely an optional element in Nakamura's alloy. But, Ca has been taught.

Applicants' argument with respect to TYS of Nakamura is noted. Arguendo the tensile strengths in Figures 6 and 8 are UTS, but it is known that TYS is about 80% of UTS which is still higher than the claimed minimum TYS.

Applicants argue that the high contents of Al, Zn, and Sn in Nakamura's alloy would reduce high temperature tensile strength. But, applicants fail to show their claimed ranges are critical and fail to substantiate their position with factual evidence by declaration. Mere argument or conclusory statements in the specification is not sufficient. *In re Geisler* (CA FC) 43 USPQ2d 1362 (7/7/1997).

Applicants' argument with respect to JP '238 is noted. But, the listing of numerous solutions to a problem does not make any one solution less obvious. *Ex parte Raychem Corp.* 17 USPQ 2d 1417, 1424 (BPAI 1990) and *Merck & Co. v. Biocraft Lab. Inc.* 10 USPQ 2d 1843 (CAFC 1983). In *Ex Parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990), the BPAI held that when a "species is clearly named, the species claim is anticipated no matter how many other species are additionally named." The Board said that "the tenth edition of the Merck Index lists ten thousand compounds. In our view, each and every one of those compounds is described' as that term is used in 35 U.S.C. § 102 (a), in that publication".

Applicants' argument as set forth with respect to compounds in Bronfin' Tables 2 and 6 is noted. But, applicants' attention is directed to instant new claims 41, which recites Al₂(Ca,Sn) and Al₂(Ca,Sn,Sr).

Applicants' argument with respect to the attached Tables 6-7 is noted. But, most of the alloying elements' contents in comparative examples are significantly out of the claimed range. Thus, they failed to show the claimed composition is critical end-point to end-point.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
February 20, 2005